PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN

SITE NAME Burlington Environmental/Pier 91 SITE CONTACT _____ PHONE _____

LOCATION Seattle, Washington EPA CONTACT David Croxton PHONE 206/553-8582

EPA I.D. No. 068-W9-0009 PREPARED BY Neil Morton DATE 10/18/92

WORK ASSIGNMENT NO. 312-R10077 DATE OF PROPOSED INSPECTION 10/20/92 & 10/21/92

☐ AMENDMENT TO EXISTING APPROVED HSP *(DATE EXISTING HSP APPROVED _____)*

OBJECTIVES: *Summarize below*

The purpose of the site investigations is to evaluate each facility's regulated units and solid waste management units (SWMUs) and other areas of concern for releases or potential releases of hazardous waste and hazardous constituents to all media. Facility operations are observed and photographed during the inspection, and facility personnel interviewed.

SITE TYPE: *Check as many as applicable*

☐	Active	☐	Landfill	☐	Unknown
☐	Inactive	☐	Uncontrolled	☐	Other *specify:*
☐	Secure	☐	Industrial		
☐	Unsecure	☐	Recovery		
☐	Enclosed Space	☐	Well Field		

SITE DESCRIPTION AND HISTORY: *Summarize below. Include principal operations and unusual features (containers, buildings, dikes, power line, terrain, etc.) and complaints from public, previous agency actions, known exposures or injuries, etc.*

Port of Seattle leases portions of Pier 91 to Burlington Environmental, Inc., Pacific Northern Oil Company (PANOCO), and City Ice and Cold storage Company. Burlington leases approximately four acres of land from the Port of Seattle, on which it operates a hazardous waste storage and treatment facility. Burlington's operations consist of transporting, storing, and treating hazardous waste from off-site generators. Hazardous waste disposal does not occur at this facility. The Burlington facility had been previously leased and operated by Chempro from 1971 to 1991. Chempro operated a waste oil treatment and recovery complex. A RCRA facility assessment was conducted at the Chempro/Burlington facility in 1988 because Chempro had applied for a RCRA permit.

Chempro/Burlington Facility: On 07/02/74 Port of Seattle investigators observed that ground surrounding some of the tanks was saturated with oily sludge. Trucks were allowed to dump oil on the ground outside the tank farm wells. Oil had seeped out of the tank farm into the storm sewer that led to Elliot Bay. Soil samples collected from the Chempro facility indicated the presence of organic solvents about three to five feet below the paved surface. One RCRA-regulated unit and 16 SWMUs were identified for the Chempro facility during the 1988 RFA.

Pacific Northern Oil Company Facility: Chempro subleased approximately 60 percent of the Pier 91 treatment and storage complex to PANOCO for use as a marine fuel depot. The Puget Sound Air Pollution Control Agency issued over 10 violations to the Chempro Pier 91 facility since 1976, all of which concerned PANOCO's boiler stack emissions. On 08/26/90, PANOCO discovered a rupture in a bunker C transfer line located near the center of Pier 91. Ecology files report another release of approximately 1,300 gallons of petroleum product into the soil from an underground pipe operated by PANOCO. On 05/14/91, PANOCO discovered another rupture in a bunker C transfer line near the south end of Pier 91. PANOCO estimated a release of approximately 30 to 60 gallons to the underlying soil. An interim product extractions system was implemented at the PANOCO pipeline site to control the migration of the diesel product found floating on the water table in the vicinity of the pipeline operated by PANOCO.

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

SITE DESCRIPTION AND HISTORY:

City Ice and Cold Storage Company: The 06/23/87 investigation of a monitoring well indicated 900 ppm of hydrocarbon vapors. Water samples collected on 08/19/87 indicated the presence of petroleum hydrocarbons. Port of Seattle records indicate a citation was issued to City Ice and Cold Storage Company for a mino ammonia release and reported oil spill that occurred on 07/24/87. Hydrocarbon contamination of soils and groundwater in the vicinity of underground storage tank #91N has been documented during investigations for construction of the new City Ice and Cold Storage Company building W-390.

Miscellaneous: Underground storage tank investigations at Pier 91 indicated soil contamination around tanks A, B, C, and K. Contamination includes total extractable petroleum hydrocarbons, benzene, and xylene.

WASTE MANAGEMENT PRACTICES: Burlington Environmental, Inc. operations include transporting, storing, and treating hazardous waste from off-site generators. Waste types treated by Chempro included dirty oily bilge water, pretreated oily wastes from other Chempro facilities, oily industrial wastewater, spent inductrial coolants, and waste machine oil from local automotive shops. PANOCO subleases part of the Pier 91 treatment and storage complex as a marine fuel depot.

WASTE TYPES: ☐ Liquid ☐ Solid ☐ Sludge ☐ Gas ☐ Unknown ☐ Other *specify: Contaminated soil and groundwater.*

WASTE CHARACTERISTICS: *Check as many as applicable*

☐ Corrosive	☐ Flammable	☐ Radioactive
☐ Toxic	☐ Volatile	☐ Unknown
☐ Inert	☐ Reactive	☐ Other *specify:*

HAZARDS OF CONCERN:

☐ Heat Stress	☐ Biological
☐ Cold Stress	☐ Noise
☐ Explosion/Flammable	☐ Inorganic Chemicals
☐ Oxygen Deficient	☐ Organic Chemicals
☐ Radiological	☐ Other *specify:*

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

HAZARDOUS MATERIAL SUMMARY: *Indicate waste type by category*

CHEMICALS:

- ☐ Acids
- ☐ Caustics
- ☐ Pickling Liquors
- ☐ Pesticides
- ☐ Cyanides
- ☐ Phenols
- ☐ Halogens
- ☐ PCBs
- ☐ Other *specify:*

SOLIDS:

- ☐ Flyash
- ☐ Asbestos
- ☐ Milling/Mine Tailings
- ☐ Ferrous Smelter
- ☐ Non-Ferrous Smelter
- ☐ Other *specify:*

SLUDGES:

- ☐ Paint Pigments
- ☐ Metals Sludges
- ☐ POTW
- ☐ Aluminum
- ☐ Other *specify: waste sludge*

SOLVENTS:

- ☐ Halogenated Solvents (F001, F002)
- ☐ Non-Halogenated Solvents (F003, F004)
- ☐ Other *specify:*

OILS:

- ☐ Oily Wastes
- ☐ Other *specify:*

MEP TOXICITY:

- ☐ Arsenic
- ☐ Barium
- ☐ Cadmium
- ☐ Chromium
- ☐ Lead
- ☐ Mercury
- ☐ Selenium
- ☐ Silver

NOTES: The site contains a fuel tank farm, a tank farm boiler, 55-gallon drums containing liquid hydrocarbons, and PCB transformers.

FIRE/EXPLOSION POTENTIAL: ☐ High ☐ Medium ☐ Low ☐ Unknown

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

CHEMICALS PRESENT AT THE SITE	HIGHEST OBSERVED CONCENTRATION (specify units and media)	PEL/TLV ppm or mg/m^3 (specify)	IDLH ppm or mg/m^3 (specify)	SYMPTOMS/EFFECTS OF ACUTE EXPOSURE	Photo Ionization Potential
PCBs	NA	Aroclor 1254 0.5 mg/m^3	NA	Skin and eye irritation, acneform dermatitis, nausea, vomiting, abdominal pain, jaundice, liver damage; (CARC).	
Toluene	NA	200 ppm	2,000 ppm	Fatigue, weakness; confusion, euphoria, dizziness; headache; dilated pupils, lacrimation; nervousness; muscle fatigue; insomnia; paresthesia; dermatitis; photophobia	8.82
Xylene (o-, m-, p-isomers)	NA	100 ppm	1,000 ppm	Dizziness, excitement, drowsiness, incoherence, staggering gait; irritated eyes, nose, throat; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis	8.56 8.56 8.44
Ammonia	NA	50 ppm	500 ppm	Eye, nose, throat irritation; dyspnea; broncospasm; chest pain; pulmonary edema; pink frothy sputum; skin burns; vesiculation	10.15
Diesel	NA	5 mg/m^3	NA	Gastrointestinal irritation, vomiting, diarrhea, and in severe cases central nervous system depression, progressing to coma or death.	
Ethyl benzene	NA	100 ppm	NA	Irritation of the skin, eyes, and respiratory system. Also, cardiac-rythm disturbance due to sensitization; acute bronchitis, bronchospasm, pulmonary and laryngeal edema; euphoria; headache; giddiniess; dizziness; and incoordination, as wella s possible depression; confusion; and coma.	
Petroleum (crude)	NA	NA	NA	Ingestion causes nausea, vomiting, diarrhea, and abdominal pain. Liver and renal injury may occur following ingestion; cardiovascular and neurologic toxicity are the major concerns following inhalation; skin irritant.	

NOTES:

NA = Not Available
NE = None Established
S = Soil
A = Air
SW = Surface Water
GW = Groundwater
T = Tailings
SL = Sludge
F = Flyash
D = Drums
TK = Tanks
L = Lagoon
U = Unknown

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

FIELD ACTIVITIES COVERED UNDER THIS PLAN

TASK DESCRIPTION / SPECIFIC TECHNIQUE / SITE LOCATION	TYPE	LEVEL OF PROTECTION Primary	LEVEL OF PROTECTION Contingency	INSPECTION DATE
The purpose of the site investigations is to evaluate each facility's regulated units and solid waste management units (SWMUs) and other areas of concern for releases or potential releases of hazardous waste and hazardous constituents to all media. Facility operations are observed and photographed during the inspection, and facility personnel interviewed.	Intrusive Non-Intrusive	A B C D Modified	A B C D Modified	October 20 & 21, 1992
	Intrusive Non-Intrusive	A B C D Modified	A B C D Modified	

SITE PERSONNEL AND RESPONSIBILITIES *(include subcontractors)*

NAME	OFFICE	PRC HEALTH CLEARANCE	RESPONSIBILITIES / TASK
Noushin Arab	Seattle	Yes	Field Team Member/Site Health & Safety Coordinator
Gwen Herron-Moon	Seattle	Yes	Field Team Member

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

PROTECTIVE EQUIPMENT: *Specify by task. Indicate type and/or material, as necessary.*

TASKS: 1 2

LEVEL: A B C D Modified

☐ Primary ☐ Contingency

☐	Respiratory:_____	☐	Prot. Clothing:_____
☐	APR:_____	☐	Tyvek Coverall_____
☐	Cartridge:_____	☐	Saranex Coverall_____
☐	Escape Mask:_____	☐	Coverall:_____
☐	Other:_____	☐	Other:_____
☐	Head and Eye:_____	☐	Gloves:_____
☐	Safety Glasses: see note	☐	Undergloves:_____
☐	Face Shield:_____	☐	Gloves:_____
☐	Goggles:_____	☐	Overgloves:_____
☐	Hard Hat: see note		
☐	Other:_____		
☐	Boots:_____	☐	Other: *Specify below*
☐	Boots: *Steel Toe/Steel Shank*		
☐	Overboots:_____		

Note: Use of personnel protective equipment as determined by On-Site Health and Safety Officer.

TASKS: 1 2

LEVEL: A B C D Modified

☐ Primary ☐ Contingency

☐	Respiratory:_____	☐	Prot. Clothing:
☐	APR: GMH-C	☐	Tyvek Coverall_____
☐	Cartridge:_____	☐	Saranex Coverall_____
☐	Escape Mask:_____	☐	Coverall:_____
☐	Other:_____	☐	Other:_____
☐	Head and Eye:_____	☐	Gloves: _____
☐	Safety Glasses:_____	☐	Undergloves:_____
☐	Face Shield:_____	☐	Gloves:_____
☐	Goggles:_____	☐	Overgloves:_____
☐	Hard Hat:_____		
☐	Other:_____		
☐	Boots:_____	☐	Other: *Specify below*
☐	Boots: *Steel Toe/Steel Shank*		
☐	Overboots:_____		

Note: Use of personnel protective equipment as determined by On-Site Health and Safety Officer.

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

MONITORING EQUIPMENT: *Specify by tasks. Indicate type, as necessary. Attach additional sheets, as necessary.*

INSTRUMENT	TASKS	ACTION GUIDELINES	COMMENTS
Combustible Gas Indicator O_2 Meter	1 2	0 - 10% LEL *No explosion hazard* 10 - 25% LEL *Potential explosion hazard; notify SHSC.* > 25 % LEL *Explosion hazard; interrupt task/evacuate* 21% O_2 *Oxygen normal* 21 - 19.5% O_2 Proceed with caution < 19.5% O_2 *O_2 deficient; stop task; notify SHSC*	☐ *Not Needed*
Radiation Survey Meter	1 2	3 x Background *Notify SHSC* >2 mR/hr *Interrupt task/evacuate*	*Note: Annual exposure not to exceed 100 mrem/year or 50 urem/hour average* ☐ *Not Needed*
Photoionization Detector ☐ 11.7 ev ☐ 10.2 ev ☐ 9.8 ev ☐ ___ ev Type _____	1 2	*Specify:* >0 - 5 ppm above background Level D >5 ppm to 20 ppm above background Level C >20 ppm above background Evacuate Site	☐ *Not Needed*
Flame Ionization Detector Type_____	1 2	*Specify:*	☐ *Not Needed*
Detector Tubes/Monitor Type_____ Type_____	1 2	*Specify:*	☐ *Not Needed*
Respirable Dust Monitor Type_____ Type_____	1 2	*Specify:*	☐ *Not Needed*
Other *Specify:*	1 2	*Specify:*	☐ *Not Needed*

PRC EMI SITE INSPECTION HEALTH AND SAFETY PLAN (Continued)

PERSONNEL DECONTAMINATION/CONTAINMENT AND DISPOSAL METHOD

Personnel will follow EPA guidance for decontamination procedures for modified Level D personnel protection (with modified Level C contingency). The following decontamination stations should be set up in a decontamination zone: (1) segregated equipment drop; (2) boot and glove wash and rinse; (3) disposable glove, bootie and overall (if Tyvek is used) removal and segregation; (4) safety glasses, and hard hat removal; and (5) hand and face wash and rinse. If site conditions require upgrade to Level C, then a station must be set up for respirator removal, decontamination, and cartridge disposal.

All disposable equipment, clothing, and wash water will be double-bagged or containerized in an acceptable manner and disposed of by the facility.

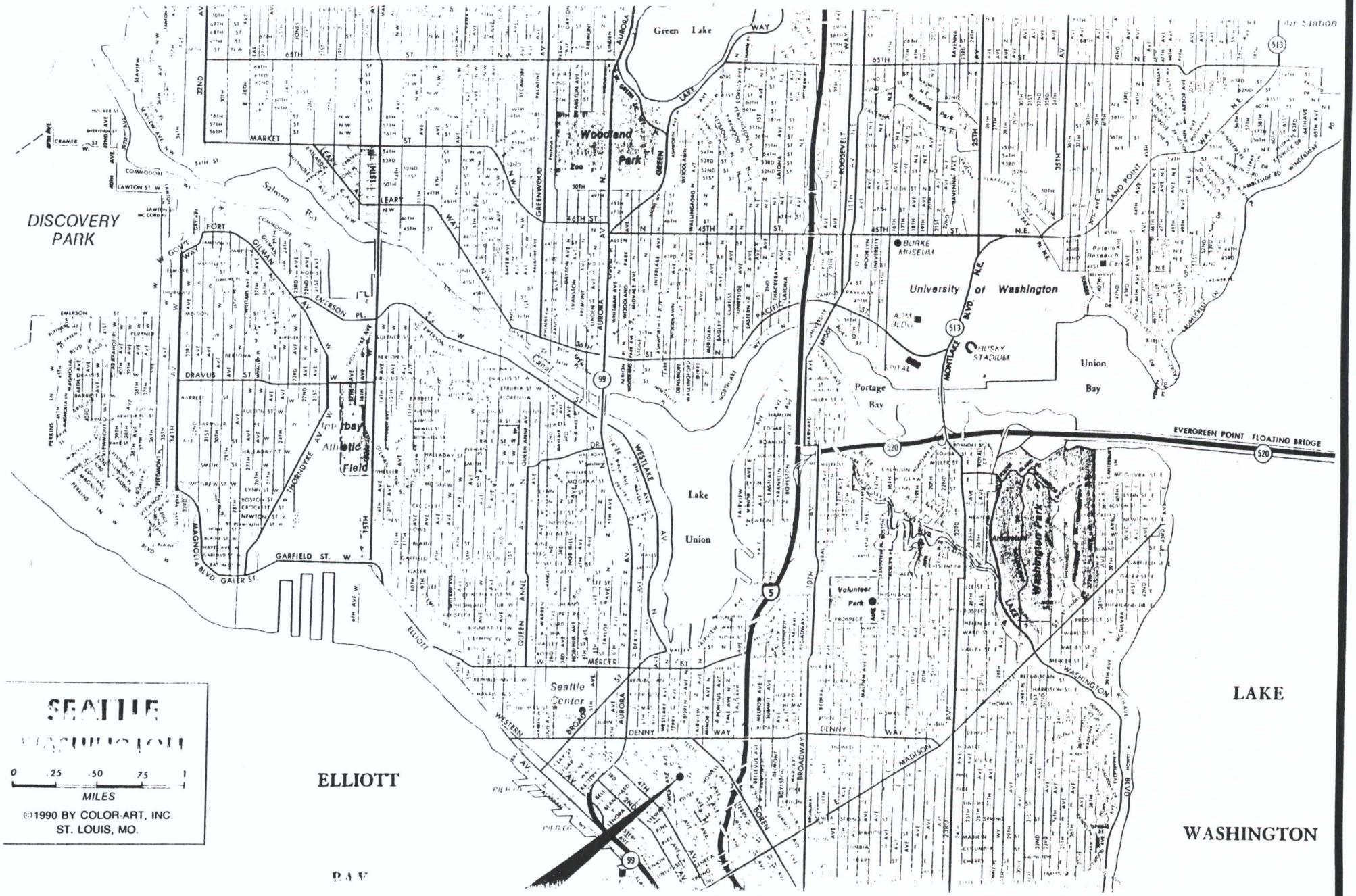
EMERGENCY CONTACTS	PHONE
USEPA Environmental Response Team	206/553-1263
U.S. Coast Guard Environmental Response Team	1-800/424-8802
CHEMTREC	1-800/424-9300
PRC Regional Health and Safety Supervisor Neil Morton	206/624-2692
Project/Site Manager Noushin Arab	206/624-2692
Site Health and Safety Coordinator Noushin Arab	On-site
Fire Department	433-5327
Police Department	433-5328

MEDICAL EMERGENCY

Hospital	Ballard Community Hospital	Emergency --789-9341
Hospital Address	N.W. Market St and Barnes Seattle, Washington	
Hospital Phone		General --782-2700
Ambulance		911

Route to Hospital *(map attached)*

Take Garfield Street West to 15th Avenue West. Turn left on 15th Avenue West north to N.W. Market Street. Turn left on N.W. Market Street to Barnes. The hospital is at the corner of N.W. Market Street and Barnes.


DISCOVERY PARK
Green Lake
Woodland Park
Zoo
Salmon Bay
University of Washington
BURKE MUSEUM
HUSKY STADIUM
Union Bay
Portage Bay
EVERGREEN POINT FLOATING BRIDGE
Lake Union
Interbay Athletic Field
Seattle Center
Volunteer Park
Washington Park
ELLIOTT
LAKE
WASHINGTON
BAY
SEATTLE
0 .25 .50 .75 1
MILES
©1990 BY COLOR-ART, INC.
ST. LOUIS, MO.

APPROVAL/SIGN-OFF FORM

WORK ASSIGNMENT:

I have read, understand, and agreed with the information set forth in this Health and Safety Plan, and discussed with the Site Health and Safety Coordinator

Name	Signature	Date
Gwen A. Herron-Moon	Gwen A. Herron-Moon	10.20.92
Noushin Arabs		10-19-92

APPROVALS:

Work Assignment Manager	10-19-92 Date
Site Health and Safety Coordinator	10-19-92 Date
Neil F Morton Regional Health and Safety Coordinator	10-19-92 Date